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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23552	7590	12/13/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EISEN, ALEXANDER	
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			2674	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,002

Applicant(s)

FUCHS ET AL.

Examiner

Alexander Eisen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 25 November 2003, with respect to the rejection(s) of claim(s) 1-14 under 35 U.S.C. 103(a) have been fully considered and are persuasive. In line 9 from the bottom on page 2 of REMARKS examiner interprets "More specifically, Kenney does not disclose" rather than "does disclose" as typed. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of the following.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "second calculating means (8)" claimed in claim 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement

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Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-14 are rejected under 35 U.S.C. 112, **second** paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation “virtual show area”, and the claim also recites "and particularly a virtual shop", which is the narrower statement of

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the range/limitation; also “representing a display case” and “particularly shelves”; “several video projectors” and “particularly six”. For the similar reason claim 2 reciting “several network personal computers” and then “particularly three” is considered to be indefinite. For same rationale, claim 8 that reciting “virtual show area, particularly a virtual shop”, and claim 9 that recites “several, and advantageously three, network personal computers”, are considered to be indefinite. Claims 2-7 and 9-14 are dependent claims, depending from claims 1 and 8 respectively and therefore also deemed to be indefinite. The following is the rejection of claims, wherein for the purpose of examining claims on merits, the examiner assumes the broadest interpretation of the claim language.

6. In addition, claim 1 recites “the virtual object”; claim 8 recites “the virtual display area”; claims 7 and 14 recites the limitation “the trolley”. There is insufficient antecedent basis for these limitations in the claim.

7. Inconsistencies in claims are numerous and therefore cannot be all considered or located by the examiner; the applicant is advised to review claims and specification in order to bring them in conformity with requirements of 35 U.S.C. 112.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lantz, "Future Directions in Visual Display Systems" (provided with applicant's IDS) in view of Burke, US 6,026,377.

With respect to claims 1 and 8 Lantz discloses a method and apparatus for making a virtual show area at nominal scale in which the user is immersed in an environment corresponding to the environment of a real show area, concerning the dimensions, the distance and the field of vision of an object, the method comprising the following steps: the basic image representing a display case at nominal scale is broken down into a predetermined number of pre-calculated sub-images, the pre-calculated sub-images are projected without overlap onto a screen using several video projectors to form a high-resolution image with the real dimensions of a display case, the video projectors are synchronized by means of at least one personal computer such that the high-resolution image built up from the projected sub-images forms a virtual display case (pp.39-40).

Lantz does not disclose that a graphic model of one the objects presented on the display is created in three dimensions and that the said virtual object is manipulated by means of a user-virtual display case interface such that, as in a real show area, the user can pick up the 3D representation of the virtual object on the display case, move it and turn it in all directions while keeping the display case within his field of vision in the background at nominal scale alongside the other objects presented on it.

Burke discloses a system for generating images representing store shelves and products located on the shelves, wherein a consumer (computer user) may manipulate displayed object in

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three-dimensional view, including a rotation of an object in order to observe it from different points of view (col. 10, line 61 – col. 11, line 18).

It would have been obvious to one of ordinary skill in the art at the time when the invention was made that the technique taught by Burke can be applied to the image generating system of Lantz, because it would advantageously allow a user to become familiar with viewed object in all perspectives.

As to claims 2 and 9, Burke further teaches that generating 3D images of products are based on information accessed from multiple remote networking sites, such as product databases and retail space management system, which provides 3D descriptions of storage space (Burke; FIG. 1; col. 4, ll. 12-51).

As to claims 3 and 10, the object is being manipulated during the manipulation phase.

As to claims 4 and 11, a modeled 3D object is manipulated by sensing the movements of the user's hand by means of a three-dimensional positioning sensor with six degrees of freedom connected to the user and virtual display case interface being in the form of a trolley (214) with (Burke; FIGS. 9-12; col. 9 lines 45-53).

As to claims 5 and 12, the three-dimensional positioning sensor is in the form of a manipulable object, such as a ball that the user holds in his or her hand (Burke; col. 5, lines 52-54). It should be pointed out also that 3D input devices with 6 DOF (degrees of freedom) are well known in the art and used for manipulating objects, and therefore it would have been obvious to those of ordinary skills in the art at the time when the invention was made that the sensor in Burke can be represented of any of these known devices, different shapes including, without bringing any unexpected results or unduly experimentation.

As to claims 6 and 13, Lantz teaches simulation of a movement of a user in the show area.

As to claims 7 and 14, Burke teaches that the sensor can be located on the trolley (shopping cart 214; see col. 10, ll. 45-53).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gupta et al., US 5,361,871, discloses a product information system for shoppers incorporated onto shopping cart (trolley).

Okimura et al., JP 04-269793, discloses synchronized large picture display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is (703) 306-2988. The examiner can normally be reached on M-F (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Alexander Eisen', with a stylized flourish at the end.

Alexander Eisen
Primary Examiner
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8 December 2004